

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A sheet sucking/removing method for sucking an uppermost sheet among a plurality of stacked sheets, and separating the uppermost sheet from another sheet therebeneath, and removing the uppermost sheet, and conveying and supplying the uppermost sheet to a subsequent process, said method comprising:

carrying out the sucking/removing by a ~~sucking~~ suction device in a first negative pressure state in which a suction negative pressure of the suction device is a minimum pressure needed in order to suck and remove only the uppermost sheet; and

after the sucking/removing, carrying out the conveying/supplying by the suction device in a second negative pressure state in which the suction negative pressure of the suction device is a pressure needed for the conveying/supplying; and

detecting the suction negative pressure of the suction device by a sensor, wherein setting of the suction negative pressure of the suction device in the first negative pressure state includes a step of opening to the atmosphere by operation of an electromagnetic valve, and setting of the suction negative pressure of the suction device in the second negative pressure state includes a step of controlling at least by the operation of the electromagnetic valve.

2. (canceled).

3. (currently amended): The method of claim 1, further comprising:
detecting the first negative pressure state and the second negative pressure state by a
sensor; and
in accordance with results of the detecting, controlling a vacuum pump connected to the
suction ~~eups~~device.

4. (currently amended): The method of claim 1, further comprising:
starting the sucking/removing immediately at a point in time when the suction negative
pressure of the suction device reaches the first negative pressure state; and
after the sucking/removing, starting the conveying/supplying of the sheet at a point in
time when the suction negative pressure of the suction device reaches the second negative
pressure state.

5. (currently amended): A sheet sucking/removing device for sucking an uppermost
sheet among a plurality of stacked sheets, separating the uppermost sheet from another sheet
there beneath, removing the uppermost sheet, and conveying and supplying the uppermost sheet
to a subsequent process, said device comprising;

a suction device provided along a transverse direction of the sheet, and sucking/removing
the sheet by negative pressure, and conveying/supplying the sheet;

a negative pressure generating source connected to the suction device, and generating a
first negative pressure which is a minimum pressure needed in order for the suction device to

suck and remove only the uppermost sheet, and generating thereafter a second negative pressure needed for the conveying/supplying; and

a negative pressure controlling device including an electromagnetic valve which is capable of controlling the suction negative pressure of the suction device to a state of the first negative pressure and a state of the second negative pressure,

wherein the suction negative pressure of the suction device is controlled to the first negative pressure by the negative pressure controlling device and the sucking/removing is carried out by the suction device, and after the sucking/removing, the suction negative pressure of the suction device is controlled to the second negative pressure by the negative pressure controlling device and the conveying/supplying is carried out by the suction device.

6. (previously presented): The sheet sucking/removing device of claim 5, wherein the negative pressure generating source includes a vacuum pump connected to the suction device via a conduit.

7. (currently amended): The sheet sucking/removing device of claim 6, wherein the negative pressure controlling device further comprises ~~an electromagnetic two-way type valve~~ and a variable throttle valve equipped with a check valve, and the ~~electromagnetic two-way type valve~~ and the variable throttle valve equipped with a check valve are connected to the conduit.

AMENDMENT UNDER 37 C.F.R. § 1.111

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8. (original): The sheet sucking/removing device of claim 7, further comprising a sensor switch which is capable of detecting the first negative pressure and the second negative pressure, and which can operate the electromagnetic two-way type valve.

9. (original): The sheet sucking/removing device of claim 5, wherein the sheet sucking/removing device is applicable to an automatic printing plate exposure device.

10. (previously presented): The method of claim 1, wherein the sucking device comprises one or more suction cups.

11. (previously presented): The sheet sucking/removing device of claim 5, wherein the sucking device comprises one or more suction cups.